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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/202-359

05/21/99

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EXAMINER

LUKTON, D.

ART UNIT

PAPER NUMBER

1653

DATE MAILED:

04/11/00

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.  
09/202,359

Applicant(s)

Arad

Examiner

David Lukton

Group Art Unit

1653



☒ Responsive to communication(s) filed on Mar 20, 2000

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claim

☒ Claim(s) 1-16 is/are pending in the application

Of the above, claim(s) 1-7 and 9-11 is/are withdrawn from consideration

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 8 and 12-16 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☒ None of the CERTIFIED copies of the priority documents have been received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892 *(attached)*

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) \_\_\_\_\_

☐ Interview Summary, PTO-413

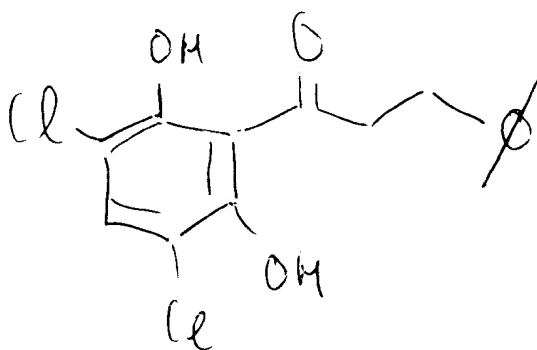
☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Pursuant to the directives of paper No. 10, claims 13-16 have been added. Claims 1-16 are pending, of which 1-7, 9-11 are withdrawn from consideration.

Applicants' election of Group 108 with traverse is acknowledged. However, applicants failed to elect a species. Upon being informed of this, Eugenia Hansen elected the following specie on 4/5/00:



Applicants have traversed the restriction requirement by arguing that claims 8-12 should be examined in their entirety, since there is a "commonality of core structure". The examiner disagrees. As it happens, one can take any two (or more) organic compounds (e.g., polystyrene, DNA, a protein, ethyl alcohol) and construct a generic claim that will encompass them. That does not mean that an "undue burden" would not have to be undertaken to search for all of them. In the instant case, there is considerable diversity of structure; the search is time consuming in part because there are large numbers of previously disclosed compounds contained within claim 8; only a small portion of them have been asserted to be useful for treating the common cold or other picornaviral infections.

Thus, a search would have to be undertaken for all of the encompassed compounds, and then a second search would have to be undertaken for a way to link the disclosed compounds to the claimed methods. However, if applicants are confident that all of the embodiments of claim 8 represent a single, unified invention, and that all embodiments are novel, applicants are invited to make a clear, unequivocal admission that all claimed embodiments are obvious over all other claimed embodiments. If this is done, the restriction requirement would likely be modified in applicants' favor. In the absence of such, the restriction requirement is still deemed to be proper.

To reiterate, Group 108 is drawn to claims 8 and 12, to the extent that the compounds of claims 8 and 12 encompass the compounds that are defined in group 34. Group 34, in turn, is drawn to compounds in which Z can vary as the claims permit, variables Z', Y, Y', and R<sup>3</sup> can vary as the claims permit, provided that none can correspond to hydrogen; "X" is one of -C=O-, -S=O-, -C=S-; and R<sub>1</sub> is a hydrocarbon chain, optionally substituted with R<sub>11</sub>.

The examiner will stipulate at this point in time that the invention of Group 108 is novel.

The art rejections imposed below are drawn to non-elected inventions within the confines of claims 8 and 12; applicants may cancel the non-elected subject matter, or respond to the rejections as deemed appropriate.

✱

The following is a quotation of the first paragraph of 35 U.S.C. §112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it in such full.

clear, concise and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 13-16 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In the specification as filed, there was a requirement that when  $X-R^1$  is a fluorinated keto acyl group, Z must be hydrogen. In claims 13-16, on the other hand, there is no such requirement. Applicants should point to the page and line number where support can be found for not complying with the above proviso.

\*

Claims 8, 13-16 are rejected under 35 U.S.C. §112 second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 8 (p. 44, line 8), it is recited that "X" can be "CO-N". However, nitrogen must form three bonds; only two are accounted for. What is permitted for the third bond?

In claim 8 (page 45, line 14), it is stated that "Z" must be one of the following: "hydroxyl, sulfhydryl, amino, carboxyl". However, in the last line of claim 8, it is stated that when  $X-R^1$  is a fluorinated keto acyl group, Z must be hydrogen. Thus, there is a contradiction. Can "Z" represent hydrogen, or not...? If there is at least one

circumstance under which "Z" can represent hydrogen, then claim 8 should be amended at page 45, line 14 to recite this possibility.

Each of claims 13-16 is dependent on a non-elected claim. Each of claims 13-16 should be written in independent form; if this is done, the phrase "Z' and R<sup>1</sup> cannot form a ring" will become superfluous.

In addition to the fact that claims 13-16 are dependent on a non-elected claim, the claim dependence is otherwise improper. Claim 8 (last line) recites that when X-R<sup>1</sup> is a fluorinated keto acyl group, Z must be hydrogen. Claims 13-16, on the other hand, permit X-R<sup>1</sup> to be trifluoromethyloxo, and at the same time, "Z" is not required to be hydrogen.

In each of claims 13-16 there are two minor errors. First "bya" (line 1) should be two words, rather than one; second, in the phrase "wherein said compound having the formula", "having" should be *has*, or the grammatical error should be otherwise corrected.

In claims 15 and 16 there is a minor typographical error. It is recited that R<sup>1</sup> can be CH<sub>3</sub>. Here, the "3" should be a subscript.

✱

The following is a quotation of the appropriate paragraphs of 35 U.S.C §102 that form the basis for the rejections under this section made in this action.

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 8 is rejected under 35 U.S.C. §102(b) as being anticipated by Berger (USP 3,657,436).

Berger teaches (col 2, line 7) that the compounds disclosed in col 1, line 34+ can be used to treat encephalo myocarditis virus. Since this is <sup>caused by</sup> a picornavirus, the claim is anticipated.

\*

The following is a quotation of 35 USC §103 which forms the basis for all obviousness rejections set forth in the Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103, the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made, absent any evidence to the contrary. Applicant is advised of the obligation under 37 C.F.R. 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103.

Claims 8 and 12 are rejected under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103 as obvious over Yamamoto (USP 5,356,620).

Yamamoto teaches the compound disclosed in col 1, lines 20-25 for treatment of allergic rhinitis. This compound falls within the scope of instant claim 8 if the variables correspond as follows:

X = -CO- ;  
R<sup>1</sup> = hydroxyl;  
Z = NHR<sup>11</sup> ;  
R<sup>11</sup> = C<sub>2</sub>-alkenyl, which is substituted (with dimethylphenyl)

There is no mention of picornavirus or rhinovirus in the reference. However, the claims at issue do not actually require that rhinovirus propagation is inhibited. Thus, the claims encompass treatment of the common cold, or any of its symptoms.

The claims are anticipated if the rhinitis (referred to in Yamamoto) is indeed caused by a rhinovirus; alternatively the claims are rendered obvious, since the infectious disease specialist of ordinary skill would recognize that the symptoms of the common cold would be at least somewhat mitigated by the disclosed compound.

\*

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Lukton [phone number (703)308-3213].

An inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0196.



DAVID LUKTON  
PATENT EXAMINER  
GROUP 1800